

A NEW SPECIES AND NEW SYNONYM IN THE GENUS *PSYCHORONIA*
(LIMNEPHILIDAE), WITH SIGNIFICANT RECORDS FOR CADDISFLIES
(TRICHOPTERA) FROM WESTERN NORTH AMERICA

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ABSTRACT.—A new species of caddisfly, *Psychoronia brooksi* (Limnephilidae), is described from New Mexico, and *Psychoronia brevipennis* (Banks) 1904 is designated as a junior synonym of *Psychoronia costalis* Banks 1901. Additional distributional records and notes for 51 caddisfly species are also presented.

Key words: Trichoptera, caddisflies, Limnephilidae, *Psychoronia*, new species, biogeography.

The discovery of a new species of *Psychoronia* in New Mexico has led to a review of the other 2 species in the genus and a resultant synonymy. Additional work at small, isolated habitats in the arid West will undoubtedly result in the discovery of additional new species of Trichoptera. These isolated distributions also emphasize the need to protect such habitats whenever possible.

Two species previously have been placed in the genus *Psychoronia*, *P. brevipennis* (Banks 1904) and *P. costalis* (Banks 1901). Wiggins (1975) provided rationale for maintaining the genus *Psychoronia* and figured the adults of *P. costalis*. Wiggins (1975) also noted the similarity of the 2 species and illustrated the larvae of *P. costalis* (Wiggins 1977). *Psychoronia brevipennis* is known only from the female holotype. During preparation for this paper I attempted to collect at/near the New Mexico type localities for both *P. brevipennis* and *P. costalis*. The top of the Las Vegas Range (the type locality of *P. costalis*) is located west of Las Vegas, New Mexico, and just west of Beulah. The type locality of *P. brevipennis* is also located west of Las Vegas near the former townsite of Beulah (2438 m). I could not locate populations of *Psychoronia* at or near the Beulah townsite. Based on discussions with residents in the area and the condition of existing aquatic habitats, it appears that many typical *P. costalis* habitats (headwater springs and very small streams) were altered/destroyed to create water supplies for recreational homes being built in the area.

Based on examination of the lectotype and paratype males in the type series of *P. costalis* (MCZ #11676), the single female holotype of *P. brevipennis* (MCZ #11657), and numerous series of *P. costalis* specimens from Colorado, *P. brevipennis*, as Wiggins (1975) suggested, is a new junior synonym of *costalis*. The holotype female of *P. brevipennis* is small (about 8 mm from head to apex of abdomen) when compared to female specimens of *P. costalis* from Colorado (up to 14 mm total length). However, terminalia of the *P. brevipennis* holotype are well within the variability seen in *P. costalis* females. Banks' (1904) indication that the wing membrane of *P. brevipennis* does not have hairs is in error. The membrane of the wing is clothed with strong, upright hairs as I indicated for *P. costalis* (Ruiter 1995). The wing membrane of the new species described below also has a few upright hairs, although the majority of the hairs on the membrane are fine and recumbent, similar to the genus *Hesperophylax*.

Terminology for genital structures follows that of Schmid (1980).

Psychoronia brooksi, new species

(Figs. 1–10)

The discovery of this new species occurred while I was looking for *P. brevipennis*. The occurrence of *Psychoronia* in this habitat, a small, high-velocity stream, was totally unexpected as my previous collections of *Psychoronia* had been only from headwater spring

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sources. This collection is another example of a species occurring on an isolated mountain in the southwestern United States. This species is named for Bill Brooks, a comrade with numerous interests, one of which is occasionally collecting caddisflies.

ADULT.—Wings and body yellowish brown; forewing membrane patterned, with pale areas margined with darker brown (Fig. 1), wing membrane with numerous long, upright and recumbent setae, nearly as long as those on wing veins. Wings of female extending beyond apex of abdomen, as long as wings of male. Length from front of head to end of forewings 16–18 mm. Spurs 1–3–4.

MALE (Figs. 2–4).—Tergite VIII with an apical patch of large, upright spines (in *P. costalis* this patch comprises slender, recumbent spines). Segment IX separated dorsally, with widest portion slightly above the mid-lateral line. Inferior appendages large, directed dorsocaudad. Segment X with intermediate appendages fused into triangular structure surrounding anal opening in caudal view, its dorsal apex extended into narrow, slightly bifid process (in *P. costalis* the apex of the intermediate appendages is acute and recurved). Superior appendages large, mesally concave, dorsally slightly concave with blunt apices; extending caudad nearly to apices of inferior appendages. Phallic parameres each terminated in several long, strongly sclerotized spines divided completely to base of paramere, the dorsal portion a thick, sinuous spine, curving laterad apically and apex with minute serrations along dorsal margin, the ventral aedeagal spines straight, clumped at their base (in *P. costalis* the parameres are shorter and the dorsal portion is composed of short, fused spines).

FEMALE (Figs. 5–7).—Ventromesal sclerotized spur on sternite VI absent. Abdominal sternal setae equal in thickness to tergal setae. Tergite IX bandlike, separated by faint suture from its very small ventrolateral lobes; ventrolateral lobes widely separated ventrally by broad, slightly sclerotized supragenital plate. Median lobe of vulval scale clavate, with broad, truncate apex, not extending caudad as far as apices of lateral lobes. Segment X fused to tergite IX and with apex tubular; its dorsal margin slightly cleft, its ventral margin concave, entire. Appendages of segment X located dorsolaterally, extending well beyond its apex,

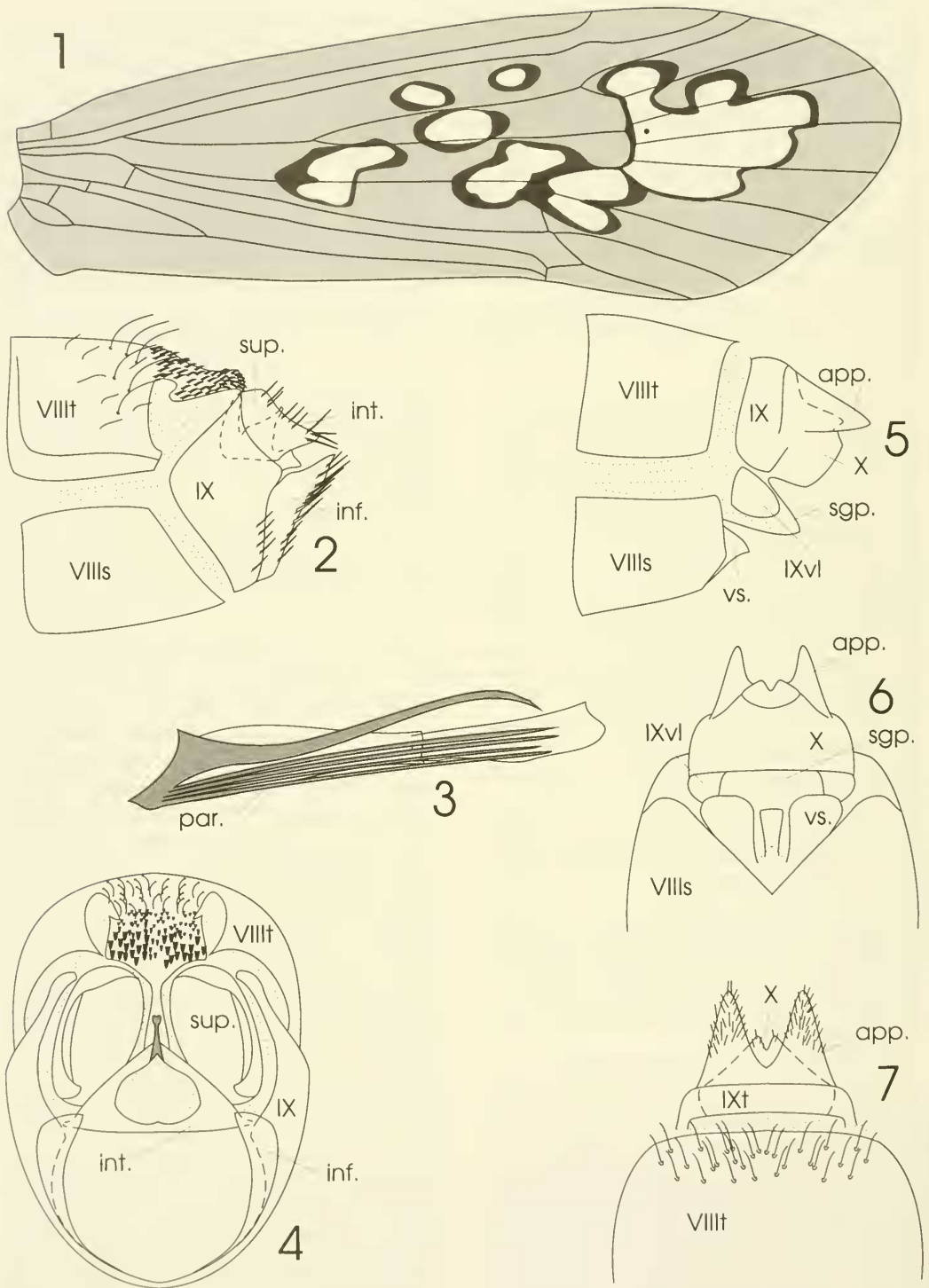
triangular in dorsal, ventral, and lateral views (in *P. costalis* the appendages of segment X are very short, not extending to apex of X).

LARVA (Figs. 8–10).—Most characters typical of Limnephilini (Wiggins 1977). Mandibles each with cutting edge entire, except for single subapical tooth (in *P. costalis* mandibles with numerous apical teeth). Head and thoracic sclerites dark, nearly black, with faint muscle scars on head. Primary setae absent from anterior pronotal margin (in *P. costalis* primary setae are present and equally spaced). Dorsal and ventral gills present on abdominal segments 2–7, most with 3–5 filaments; lateral gills present only on segments 2 and 3, most specimens with 2 filaments for each lateral gill. Abdominal dorsal chloride epithelia absent, ventral chloride epithelia large, present on segments 2–7.

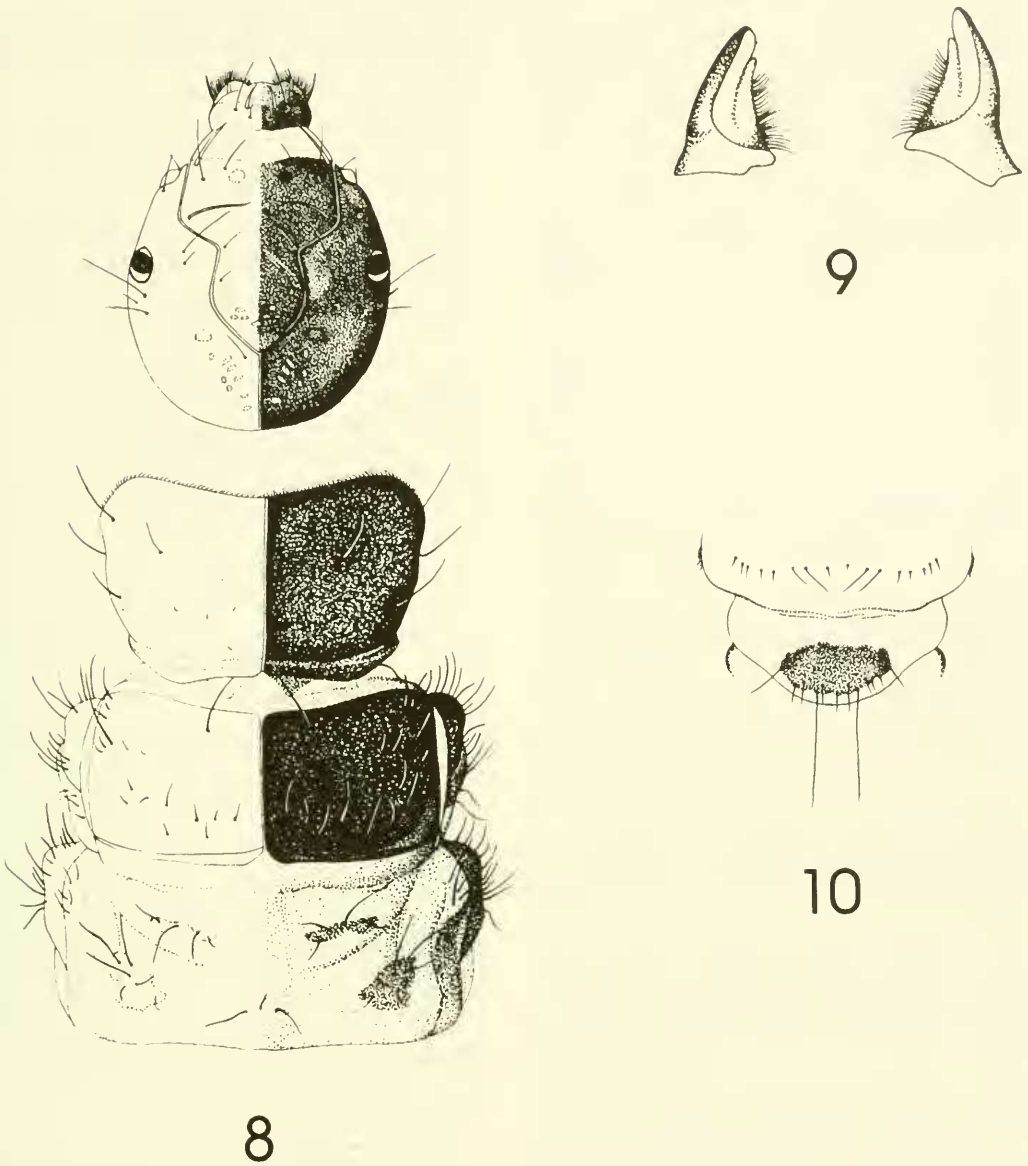
CASES.—The larval case is made of sand grains, only slightly tapered from wide anterior end to posterior, and slightly curved. Pupal case (17–20 mm) made of larger rock particles similar to that of *P. costalis* (see Wiggins 1977, Fig. 10.46), nearly straight, not tapered. Several cases have incorporated occasional live fingernail clams.

TYPE SPECIMENS.—Holotype and allotype. NEW MEXICO: Lincoln County, North Fork Rio Ruidoso, at entrance to Ski Apache Ski Area, collected as pupae 24 May 1997, emerged 20 June 1997, D.E. Ruiter. Deposited: Museum of Comparative Zoology. Paratype males: same data, emerged 20–22 June 1997, deposited Museum of Comparative Zoology, National Museum of Natural History, Illinois Natural History Museum, Royal Ontario Museum. A paratype male and female, same data, deposited at NMNH. A pupal exuvia and 4 larvae, same data, deposited at each of the above collections. The remainder of the adult (8 males, 1 female), pupal, and larval material from the same collection retained in author's collection.

DIAGNOSIS.—Males of *P. brooksi* can be separated readily from *P. costalis* by the stiff, dark spines on tergite VIII versus the fine, hairlike spines on tergite VIII of *P. costalis*. In addition, phallic parameres of *P. brooksi* are at least twice as long as those of *P. costalis*. Females of *P. brooksi* have normal length wings that extend well beyond the abdomen, while wings of all females of *P. costalis* I have examined do not extend beyond the 5th abdominal segment and usually do not exceed



Figs. 1-7. *Psychoronia brooksi* forewing and genitalia: 1, right side forewing; 2, male genitalia, left lateral view; 3, male aedeagus, left lateral view; 4, male genitalia, caudal view; 5, female genitalia, left lateral view; 6, female genitalia, ventral view; 7, female genitalia, dorsal view (VIII - tergite VIII segment, VIIIls - sternite VIII segment, IXt - tergite IX segment, IXvl - ventrolateral lobe IX segment, X - X segment, app. - appendage, inf. - inferior appendage, int. - intermediate appendage, sgp. - supragenital plate, sup. - superior appendage, vs. - vulval scale).



Figs. 8-10. *Psychoronia brooksi*, larva: 8, head and thorax, dorsal view; 9, mandibles, dorsal view; 10, ninth abdominal tergite, dorsal view.

the 5th abdominal segment. Appendages of the female *P. brooksi* segment X extend posteriorly well beyond the apex of segment X, while those of *P. costalis* do not reach the apex of segment X. Larvae of the 2 species can be separated based on the setae of the pronotum: *P. costalis* has several evenly spaced setae along the anterior margin of the pronotum (see Wiggins 1977, Fig. 10.46), whereas these setae are absent in *P. brooksi*.

REMARKS.—The occurrence of a macropterous female *Psychoronia* conflicts with the primary character Banks (1916) used to define the genus: "female short-winged." Wiggins (1977) separated *Psychoronia* larvae from *Hesperophylax* based on the lack of lateral gills beyond segment 3 in *Psychoronia*. This character seems to be valid for *P. brooksi*, although *P. brooksi* larvae usually have the posterior lateral gill branched. I have also seen occasional

Colorado *P. costalis* larvae with branched lateral gills. Another character that appears to separate *Psychoronia* larvae from *Hesperophylax* is the reduced number of primary setae along the anterior pronotal margin of *Psychoronia*. In *Hesperophylax* the primary setae are numerous and not evenly spaced.

Psychoronia brooksi is known only from the type collection, which consisted of numerous larvae and pupae. Adults were reared from pupae by placing the pupae in plastic bags along with a piece of damp moss. The bags were transported in a cooler on ice for about a week and then placed in a home refrigerator. Adults started emerging in the refrigerator about a month later. Larvae were numerous throughout all but the highest velocity habitats of the North Fork Rio Ruidoso. This flowing-water habitat, along with the scraper mandibles of the larvae, is unusual for most members of the Limnephilini, but similar to that of *Hesperophylax*. The stream had a maximum width of about 2.5 m at the time of collection. Pupae were located in aggregations of 5 to 10 along the lateral margins of the largest boulders I could turn over in the stream, just below the water-substrate interface. This is often the same type of habitat where *Hesperophylax* pupae are found. This is not usually the case for Colorado *P. costalis* pupae, which are often lying scattered throughout the vegetation of headwater seepage area habitats, although they may be attached to rocks and sticks. I have not seen *P. costalis* in streams larger than about 0.4 m wide; they are most often found within <3 m of the headwater spring source. There also seems to be some type of habitat partitioning between *P. costalis* and *Hesperophylax*. Whereas *Hesperophylax occidentalis* (Banks) is very common in high-altitude Colorado headwater seepage areas, in those seepage areas which contain *P. costalis*, *H. occidentalis* is found further downstream in the outlet stream. A single *Hesperophylax* sp. larva (along with larvae of *Lepidostoma* sp. and *Oligophlebodes* sp.) was collected along with the *P. brooksi* larvae.

The presence of 10-mm larval cases and 20-mm pupal cases in late May suggests a 2-yr life cycle for *P. brooksi*. In Colorado *P. costalis* emerges from late July through early September, and I have not seen evidence of small

larvae being present during emergence, therefore suggesting a univoltine life cycle for *P. costalis*.

ADDITIONAL RECORDS AND NOTES ON WESTERN NORTH AMERICAN CADDISFLIES

The following are additional distributional records for western North American caddisflies. Special recognition goes to the following institutions/individuals for providing most of these specimens: Colorado State University, C.P. Gillette Museum of Arthropod Diversity; B.C. Kondratieff (CSU); University of Wyoming, R.J. Lavigne (UW); Purdue University, A. Provonsha (PU); Brigham Young University, Monte L. Bean Life Science Museum, R.W. Baumann (BYU); Illinois Natural History Survey, K.A. Methven (INHS); California Academy of Sciences, V.F. Lee (CAS); Dean Blinn (DB); G.Z. Jacobi (GZJ); and S.R. Moulton II (SRM).

Apataniidae

Apatania shoshone Banks 1924. ALASKA: Katmai Peninsula; at lights, Alaknak River, Alaknak Lodge, W.G. Downs, 22 August 1987, 2M 1F (DER).

Apatania zonella (Zetterstedt) 1840. WYOMING: Albany County, Meadow Creek at Glacier Lakes, Medicine Bow National Forest, H. Copeland, 29 June 1987, 1F; West Glacier Lake, Medicine Bow National Forest, B.C. Kondratieff & W.B. Painter, 21 July 1987, 1F; Glacier Lakes, T. Ebert, 4 July 1988, 3F (CSU); Carbon County, swept from herbage near edge of Lake Marie, 20 km W of Centennial, P.H. Arnaud, Jr., 1 August 1973, 1F (CAS).

Brachycentridae

Micrasema onisca Ross 1947. ARIZONA: Coconino County, front passage to Roaring Springs Cave, Grand Canyon National Park, D. Blinn, 28 September 1994, 1M 1F (DB).

Glossosomatidae

Agapetus boulderensis Milne 1936. NEW MEXICO: Colfax County, creek, U.S. 64, west of Cimmaron, M. Harris, 8 August 1990, 11M 1F (CSU).

Glossosoma velorum Ross 1938. YUKON TERRITORY: Stewart River at Mayo, J.C. Abbott & K.W. Stewart, 24 June 1996, 1F; Ross River, at Canal Road, 2.1 mi N of Perry Barge, J.C. Abbott & K.W. Stewart, 25 June 1996, 3M 7F (SRM).

Protophila coloma Ross 1941. WYOMING: Park County, Firehole River, near Old Faithful, B.C. Kondratieff, 8 June 1987, 15M (CSU); Teton County, Gibbon River, Gibbon Falls Picnic Ground, Yellowstone National Park, R.J. Lavigne, 13 July 1989, 3M (UW).

Goericidae

Goercilla baumanni Denning 1971. WASHINGTON: Spokane County, small streams, Big Spring Picnic Ground on Mount Spokane, D.E. Ruiter, 9 June 1996, 1M (DER).

Hydropsychidae

Ceratopsyche protis (Ross) 1938. ARIZONA: Santa Cruz County, Santa Rita Lodge, Madera Canyon, P.A. Opler, 30 July 1991, 2M (CSU); WYOMING: Sublette County, Green River at Highway 191, K.D. Alexander & L.A. Stewart, 4 August 1995, 9M 3F (SRM).

Cheumatopsyche lasia Ross 1938. COLORADO: Las Animas County, Purgatoire River, Iron Canyon, Rourke Ranch, PCMS, B.C. Kondratieff, 14 July 1991, 13M 1F; Otero County, Purgatoire River, Route 109, B.C. Kondratieff, 9 April 1992, 2M (CSU).

Hydropsyche californica Banks 1899. NEW MEXICO: Catron County, at light, Taylor Creek below Wall Lake, Gila National Forest, B.C. Kondratieff & R. Durfee, 24 July 1994, 22M 15F; Dona Ana County, Radium Springs, H.E. Evans, 13 May 1989, 9M; Sierra County, Rio Grande, Percha Dam State Recreation Area, B.C. Kondratieff, 17 July 1989, 20M 5F (CSU).

Hydropsyche occidentalis Banks 1900. NEVADA: Washoe County, Truckee River, Verdi Fish Hatchery, R.W. Baumann, 10 May 1983, 1M (BYU); SOUTH DAKOTA: Bennett County, 10 mi E of Martin, La Creek National Wildlife Refuge, P.A. Opler, 26 May 1990, 1M 1F; Fall River County, Hot Springs, B.C. Kondratieff, 15 July 1988, 11M (CSU).

Smicridea fasciatella McLachlan 1871. CALIFORNIA: Riverside County, Colorado River, Route 95, B.C. Kondratieff & R.W. Baumann, 20 June 1988, 6M 1F; Colorado River, Mayflower Park, Blythe, B.C. Kondratieff & R.W. Baumann, 20 June 1988, 6M 12F (CSU).

Hydroptilidae

Agraylea saltsea Ross 1938. WYOMING: Park County, Virginia Cascades, Yellowstone National Park, H.R. Lawson, 19 July 1989, 3M 2F (CSU).

Hydroptila ajax Ross 1938. CALIFORNIA: Riverside County, Colorado River, Route 95, B.C. Kondratieff & R.W. Baumann, 20 June 1988, 2M (CSU). This appears to be a significant western extension of records for this species.

Hydroptila angusta Ross 1938. WYOMING: Crook County, Belle Fourche River, Hulett, B.C. Kondratieff & R.W. Baumann, 15 July 1997, 1M (CSU). This extends the distribution of this species further northwest.

Hydroptila arctica Ross 1938. NEW MEXICO: Grant County, West Fork of Gila River, at Road 15, Gila National Forest, P. McCafferty, A. Provonsha, & D. Bloodgood, 6 May 1981, 1M 5F (PU).

Hydroptila consimilis Morton 1905. NORTH DAKOTA: Hettinger County, Cannonball River, New England Route 22, B.C. Kondratieff & R.W. Baumann, 15 July 1997, 4M 4F (CSU).

Hydroptila pecos Ross 1941. MONTANA: Bighorn County, Bighorn River, Fort Smith, D.E. Ruiter, 5 September 1991, 17M (DER); SOUTH DAKOTA: Fall River County, Fall River, Hot Springs, B.C. Kondratieff, 15 July 1988, 2M 1F; 5 February 1995, 2M 1F (CSU).

Hydroptila salmo Ross 1941. WYOMING: Carbon County, Medicine Bow River, about 2 mi E of Elk Mountain on Interstate 80, R.J. Lavigne, 23 August 1982, 5M (UW).

Leucotrichia pictipes (Banks) 1911. SOUTH DAKOTA: Fall River County, Fall River, Hot Springs, B.C. Kondratieff, 15 July 1988, 10M 4F; 5 February 1995, 6M 1F (CSU).

Ochrotrichia alsea Denning & Blicke 1972. CALIFORNIA: Butte County, Diamond Timber, 2.5 mi E of Hwy 52 and Rd 150G, P.A. Opler & E. Buckner, 9 July 1993, 5M (CSU).

Ochrotrichia logana Ross 1941. ALASKA: Katmai Peninsula, at lights, Alaknak River, Alaknak Lodge, W.G. Downs, 22 August 1987, 1M 2F (DER). This represents a major northwestern distribution extension.

Ochrotrichia stylata (Ross) 1938. NEW MEXICO: Grant County, West Fork of Gila River, at Rd 15, Gila National Forest, P. McCafferty, A. Provonsha, & D. Bloodgood, 6 May 1981, 1M (PU).

Ochrotrichia tarsalis (Hagen) 1861. SOUTH DAKOTA: Fall River County, Fall River, Hot Springs,

B.C. Kondratieff & R.W. Baumann, 5 February 1995, 3M 4F (CSU).

Orthotrichia aegerfasciella (Chambers) 1873. COLORADO: Larimer County, black light trap, Mail Creek, P.A. Opler, 18 August 1988, 1F; 10 August 1989, 2M (CSU). This appears to be the westernmost collection for this species.

Oxyethira pallida (Banks) 1904. COLORADO: Baca County, East Carrizo Creek, Carrizo Creek Picnic Ground, B.C. Kondratieff, 16 July 1992, 1M; Larimer County, light trap, Mail Creek, Fort Collins, P.A. Opler, 29 August 1989, 1M; black light trap, Shields Pond, off Shields Road, B.C. Kondratieff, 5 July 1991, 24M 15F; black light trap, Shields Pond, Fort Collins, B.C. Kondratieff & R. Durfee, 5 July 1991, 22M 30F; Montezuma County, Toten Reservoir, east of Cortez, B.C. Kondratieff, 2 May 1992, 10M 4F (CSU).

Zumatrichia notosa (Ross) 1944. NEW MEXICO: Grant County, West Fork of Gila River, at Rd 15, Gila National Forest, P. McCafferty, A. Provonsha, & D. Bloodgood, 6 May 1981, 4M 2F (PU).

Lepidostomatidae

Lepidostoma aporum Denning 1949. ARIZONA: Coconino County, front passage to Roaring Springs Cave, Grand Canyon National Park, D. Blinn, 28 September 1994, 1M (DB); COLORADO: Larimer County, Upper Beaver Meadows Picnic Area, Rocky Mountain National Park, P.A. Opler, 12 July 1990, 2M (CSU); Laramie River, at Honholtz Lakes access, D.E. Ruiter, 15 July 1988, 9M 3F (DER).

Lepidostoma cascadense (Milne) 1936. NEW MEXICO: Taos County, Red River at Zwergel Dam, G.Z. Jacobi, 29 July 1980, 1M (GZJ).

Leptoceridae

Ceraclia unnilicornis (Stephens) 1836. WYOMING: Carbon County, Big Creek, 3 mi above confluence with North Platte River, D. Rees, 27 June 1988, 3M 3F (CSU); Park County, Slough Creek Campground, Yellowstone National Park, R.J. Lavigne, 2 August 1990, 2M 2F (UW).

Oecetis cinerascens (Hagen) 1861. COLORADO: Baca County, Picture Canyon, B.C. Kondratieff, 15 June 1994, 1M (CSU).

Oecetis immobilis (Hagen) 1861. COLORADO: Saguache County, at lights, Russell Lakes State Wildlife Area, R. Durfee, 6 July 1994, 3M; 17 July 1994, 1M 3F; 8 August 1994, 2M 8F (CSU). These

appear to be the southwesternmost records for this species.

Oecetis inconspicua (Walker) 1852. NEW MEXICO: San Miguel County, Pecos River, near Monastery Lake, G.Z. Jacobi, 5 October 1980, 1M (CSU).

Triaenodes tarthus Milne 1934. CALIFORNIA: Butte County, 10 mi ESE of Chico, Centerville, P.A. Opler, 11 August 1993, 2M 1F (CSU).

Limnephilidae

Asynarchus circopa (Ross & Merkle) 1952. WYOMING: Big Horn County, Meadowlark Lake, Bighorn National Forest, M.W. Sanderson, 24 August 1954, 1M (INHS); Fremont County, Golden Lakes, Middle Fork Bull Lake Creek, D. Rees, 6 August 1996, 2M (CSU); Teton County, Lewis Lake, Yellowstone National Park, R.J. Lavigne, 31 July 1990, 1M (UW).

Asynarchus montanus (Banks) 1907. Herrmann et al. (1986) did not report this species from Colorado, doubting the record of Schmid 1955. I have now seen specimens from the west side of Rocky Mountain National Park. COLORADO: Grand County, 1.2 mi S of Bowsu Baker Trailhead, Rocky Mountain National Park, P.A. Opler, 23 July 1994, 1M; Harbison Picnic Area, Rocky Mountain National Park, P.A. Opler & E. Buckner, 29 July 1995, 1M; Green Mountain Employee Area, Rocky Mountain National Park, P.A. Opler, 30 August 1997, 1M (CSU); OREGON: Clatsop County, black light trap, Astoria, K. Goeden, 1 September 1969, 1M (CAS).

Asynarchus mutatus (Hagen) 1861. UTAH: Duchesne County, White Rocks River below Chepeta Lake, Ashley National Forest, R.C. Mower, 20 July 1984, 1M; Summit County, China Meadows, Uinta Mountains, R.W. Baumann & B.J. Sargent, 14 July 1986, 2M (BYU). These collections represent a significant southern distributional extension for this species. It seems that the Uinta Mountain area of Utah contains many interesting distributional records (see discussion under *Hydatophylax hesperus*).

Chyranda centralis (Banks) 1900. NEVADA: Elko County, stream above Angel Lake, Ruby Mountains, R.W. Baumann, 3 August 1990, 1M 1F (BYU).

Chistoronia flavicollis (Banks) 1900. WASHINGTON: Chelan County, Minotaur Creek, 10 mi W of Wenatchee Lake, site #6, in uncut timber (north and south of Rd 2728), J.R. Wood, 14 July 1976, 1M (DER). This appears to be the most southern record for this species.

Glyphopsyche irrorata (Fabricius). WASHINGTON: Kittatus County, Teanaway River, Hwy 10, 4 mi S of Cle Elum, R.W. Baumann & S.D. Smith, 6 May 1982, 1F (BYU).

Hydatophylax hesperus (Banks) 1914. UTAH: Wasatch County, Bryants Fork Creek, Strawberry Reservoir, M. Whiting, S. Wells, & L. Liu, 14 June 1989, 1M (BYU). This record is based on a 1989 collection. Subsequent to that collection the entire drainage, including the headwater springs, was rotenoned in an attempt to restore a nonnative sport fishery in a downstream reservoir. The Bryants Fork Creek locality was revisited in 1995 and 1996 and no caddisflies were located. In an effort to create/maintain a nonnative sport fishery, it is likely that isolated native aquatic species within this drainage, such as *Hydatophylax hesperus*, have been eliminated.

Limnephilus moestus Banks 1908. NEW MEXICO: Santa Fe County, Medio Creek, at Santa Fe Ranch Ski Lodge, K.D. Alexander & L.A. Stewart, 5 July 1995, 1M (SRM).

Limnephilus sansoni Banks 1918. RUITER (1995) indicated that the Colorado record of Dodds and Hisaw (1925) was questionable and did not include *Limnephilus sansoni* from Colorado. I have now seen specimens from Grand County, Colorado, on the opposite (western) side of the Continental Divide from the locality reported by Dodds and Hisaw. Grand County, Green Mountain Employee Area, Rocky Mountain National Park, P.A. Opler, 30 August 1997, 6M 2F (CSU).

Psychoglypha prita (Milne) 1935. The record for *Psychoglypha ormiac* (Ross) 1938 from Teton County, Wyoming (Ruitter and Lavigne 1955), is an error. These specimens are *Psychoglypha prita* (Milne) 1935. Teton County, Taggart Creek, 7000 feet, H.E. Evans, 6 October 1983, 25M (CSU).

Psychoglypha schuhi Denning 1970. WYOMING: Sublette County, Lead Creek, D.E. Ruitter, 25 October 1995, 3M (DER). This appears to be only the 2nd collection reported for this species. Type locality is in Nevada.

Polycentropodidae

Cynnellus fraternus (Banks) 1905. COLORADO: Bent County, Caddoa Creek, at Road CC, B.C. Kondratieff, 14 July 1992, 1F; black light trap, John Martin Reservoir, B.C. Kondratieff, 16 July 1992, 3M; Prowers County, Arkansas River, U.S. 50, Lamar, B.C. Kondratieff, 23 August 1996, 1M (CSU).

Polycentropus crassicornis Walker 1852. MONTANA: Rosebud County, Colstrip, quicktrap TF R2 Q33, Leetham, 20 June 1975, 1M (DER).

Psychomyia flavida Hagen 1861. ARIZONA: Coconino County, Oak Creek, along U.S. Hwy 89A north of Sedona, S.R. Moulton, 12 June 1995, 2M 2F (SRM).

Rhyacophilidae

Rhyacophila narvae Navas 1926. WYOMING: Park County, Virginia Cascades, Yellowstone National Park, H.R. Lawson, 19 July 1989, 1M 1F (CSU).

Rhyacophila pellisa Ross 1935. NEW MEXICO: Taos County, Red River at Zwergel Dam, G.Z. Jacobi, 29 July 1980, 1M (GZJ).

Uenoidae

Neophylax rickeri Milne 1935. COLORADO: Jackson County, black light trap, North Platte River at Ginger Quill Ranch, W.G. Downs, 1 September 1990, 1F (DER). This appears to be a major south-eastern distributional extension for this species.

Oligophlebodes minutus (Banks) 1897. YUKON TERRITORY: Little Rancheria Creek, at Alaska Highway, J.C. Abbott & K.W. Stewart, 26 June 1996, 1M (SRM).

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